

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

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Weekly Bulletin



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State Office Building, 217 West First Street Madison 1271

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GUY P. JONES
EDITOR

Municipal Refuse Problems and Procedures

A Survey of Methods of Collection and Disposal in 53 Pacific Coast Cities

By C. G. GILLESPIE, Chief, and E. A. REINKE, Senior Engineer, Bureau of Sanitary Engineering, California State Department of Public Health

The problems involved in keeping a city and adjacent countryside clean of municipal refuse at minimum expense are necessarily varied and are influenced by population and population density; the habits of the people; the form of government; the ownership of the utilities, whether governmental or private; and considerations of topography, roads, and the nature of the countryside. Procedures should therefore conform to circumstances and needs. Nevertheless, it seems that there has been regrettably little of the engineer's analytical approach to the problems presented. One of the salutary signs detected is a growing tendency of city officials to compare notes with one another and to adopt fewer and better procedures. All aim at cheaper and more complete removal of municipal refuse and at more creditable methods of final disposal.

METHODS OF FINANCING

Payment of the charges for municipal disposal is made in many ways, all of which fall into three general groups: (1) taxation, that is, from the general fund; (2) service charges collected by the municipality; and (3) service charges collected by the private contractor. In the 52 cities reporting on this sub-

ject, 19, mainly in southern California, finance collection and disposal by taxation. In 7, collection of the service charge is by the city, in some cases by the water department or other publicly owned utility on the department's bill. In 26, the private scavenger does his own collecting. Of course it does not necessarily follow that there is municipal refuse collection in the cities depending on taxation or having municipal collection of the service charges. They may contract with a private scavenger for that service, retaining in their own hands the collection of the moneys.

The strong argument for the taxation method is that it comes nearest to assuring universal service, and only on such a basis is the cost of removal the lowest. The theory on which this practice is based is that refuse removal is a proper and necessary governmental function, required for the protection of the health and safety of the community. Like sewage removal, education, and the protection of health and property in general, this service should be free to all regardless of their ability to pay. In the matter of refuse collection and even removal of sewage, however, this theory has given way in many cities to the necessity for a more dependable source of support for the service in the face of an increasing drain

on tax moneys. The recent trend has been away from the taxation method, toward schemes of financing dependent on collection from the actual users of the service.

Collection and disposal of refuse are still generally done by private waste scavengers; 26 of the cities reported that method. The scavenger is his own bill collector, either with or without regulation of the amount of the charge by the city. Variations from this simple method are found in various places. Most places set up a basis for special service and may or may not prescribe the rates to be charged. Some cities bill the householder on his water, light, or gas bill.

ORDINANCE PROVISIONS

Copies of ordinances were furnished by about half the cities heard from. The general form of ordinance reported covered the keeping, collection, and disposal of municipal refuse. The following subjects were handled in greater or less detail:

1. Definition of terms used, particularly swill, garbage, combustible and noncombustible rubbish, tree trimmings, and ashes.
2. Authority to make contracts for collection and disposal of refuse.
3. Containers, usually water-tight metallic cans of specified shape and size, with tight-fitting lids, in sufficient number to hold all materials accumulating between collections.
4. Location of container, which should be convenient for collection, usually in backyard, in alley, or at curb, there placed by householder on day set for collection.
5. Segregation of various materials as defined in the ordinance.
6. Collection at intervals of from one day to one week for garbage and mixed refuse, and up to two months for noncombustible refuse.
7. Vehicles for collection required to have metal or metallic-lined bodies with metal or canvas covers and to display the name of the city and the collecting agency.
8. Permits for operating collection business if done by a private agency, and license fees.
9. Control of collection and disposal vested in health officer, city engineer, or some other official.
10. Rates of charges, if any, classified in accordance with type of service needed.
11. Penalties for violation of the ordinance.

In many ordinances the disposal method is outlined and the location of the disposal area given. Some prohibit disposal on public or private property, while others allow certain forms of private disposal.

A few ordinances expressly prohibit the individual from transporting his own refuse; a few allow it if a permit is obtained; and others allow it without restriction. Several ordinances contain sections prohibiting interference with refuse cans by private parties.

PRIVATE COLLECTION OF REFUSE

Of the 52 cities reporting on method of collection, 31 have private scavenger service under regulation by contracts varying from a day-to-day period to as long as 10 years. Some replies indicate that a 5-year period does not justify the contractor in obtaining adequate or proper equipment. In 7 of these 31 places, the city keeps the collection of the bills in its own hands.

The financial provisions of the contracts are variable. In some cases the rate is based on tonnage collected, in some on a flat rate, and in some on a percentage of the receipts. Often separate contracts are made for the collection of swill, and in several instances separate collection of rubbish is reported. Many cities allow individuals to haul rubbish to the disposal site. Some allow dumping free of charge, and others make a charge for the cost of handling at the dump. In towns having private scavenger service, the argument in favor of allowing individuals to haul their own refuse to the disposal site, with or without charge, is that it removes the temptation to dump on vacant lots or roadsides and so results in a cleaner city.

SEGREGATION OF WASTE

More or less segregation of the different wastes is practiced in nearly every city reporting. In 21, swill is segregated, but only from restaurants and hotels. Cities feeding garbage to hogs usually have but two classes—garbage and rubbish. Still others go a step further and separate rubbish into combustible and noncombustible. Los Angeles has all four segregations: swill, household and market garbage, combustible rubbish, and noncombustible rubbish.

The question of segregation is closely related to the method of disposal and is largely dependent on the habits of the people in a given community. The comment of a city official in San Francisco at a public meeting was that if a candidate wanted to be sure of defeat, he had only to mention that he was in favor of requiring the housewife to separate garbage and refuse. Many cities report that householders take easily to wrapping the garbage, as it keeps the can dry and clean, prevents rust, and prolongs the life of the receptacle. Hog feeders object to paper in the garbage, and one city engineer reported, "Hogs do not eat paper."

FREQUENCY AND PLACE OF COLLECTION

Variations in the frequency of collection of garbage and refuse, as reported, are from once a day to once a month. If the so-called "clean-up weeks" are included, one might extend the period to once a year. The common schedule is daily collection in the business district and weekly collection in the residential area. Cities disposing of garbage to hogs usually collect at least twice weekly, since fresh garbage makes the better feed.

An important element in the cost of collection of refuse appears to be the point from which collection is made, as there appear to be factors of economy other than the mere difference in travel distance from the curb to the backyard. For example, with curb collection, the scavenger can use a tub to advantage and collect from two or more premises before dumping into the truck. On the other hand, the sight of garbage cans and receptacles lining the curbs and front yards is objectionable to those who are particular about the appearance of their city. Backyard collections are reported from 28 cities, and curb collections from 12, whereas 3 report both. The majority of cities disposing of garbage by hog feeding, as is the practice in southern California, have curb collections. Costs in cities having backyard collection are noticeably higher than in similar cities having curb collection.

NEW TYPES OF TRUCKS DEVELOPED

In many cities the men in charge of the work have given a great deal of thought to the type of truck used. Improvements from time to time have resulted in a gradual lowering of the height of bodies with a view to saving man power in loading and unloading. For the sake of economy, the larger cities appear to be adopting trucks of larger capacity, until now 12 and 14-cu. yd. trucks are not uncommon.

A new 12-cu. yd. truck designed by the Berkeley Garbage Department has a low body, the highest point being only 60 inches above the ground. Drop boards on the sides allow it to be partly filled with still lower lifts. Unloading is done by a transverse diaphragm, which when not in use stands upright behind the cab. A pair of chains extend to the tailboard. The truck is unloaded by attaching these chains to cables, which in turn are fastened to a "dead man" at the dump, or to a tractor. The diaphragm simply slides the contents out the back with a minimum of scattering of papers and refuse.

The City Engineer of Santa Ana has designed a unique 3-ton garbage truck which has an enclosed steel body, of the dump type, lined on the inside with monel metal. The truck is loaded through side doors

at the front end. At intervals, a hoist tilts the body backward, causing the material to fill the rear part. Loading is then resumed until the truck is full. The tailboard is practically watertight.

Trucks for handling mixed refuse, combustible refuse, and noncombustible refuse are made in a great variety of sizes and shapes. In general, they are emptied by backward tilting, by the use of a diaphragm, or by hand. In some cities, divided or compartment trucks are used so as to keep garbage and rubbish separate for disposal.

In some cases reported the haul is to a loading depot, but in most cases it is to the dump site. The shortest was at Olympia, Wash., where swill is hauled only one-half mile, partly for hog feeding and partly for feeding at a fox farm.

The longest haul reported was at San Jose, Cal., more than 30 miles for swill and 11 miles for mixed refuse. Two cities have long hauls from loading depots to disposal sites. At Los Angeles swill and garbage are transported by a train of gondola cars about 50 miles to the hog ranch of the Fontana Farms Corporation in San Bernardino County. At Oakland, Cal., mixed refuse is transported over 40 miles by boat to dumping grounds off the Golden Gate, 25 miles from the nearest shore. The State law in California, passed in 1911, forbids dumping of garbage, refuse, or swill in any navigable water of the State within 20 miles of any coast line in the State.

(Continued in next issue)

STOCKTON STUDENT WINS HEALTH AWARD

Miss Mary E. Raven of Stockton won honorable mention in the sixth annual Gorgas essay contest conducted by the Gorgas Memorial Institute of Tropical and Preventive Medicine. The first honors went to George A. Delhomme, Jr., of Houston, Texas. The contest, which was open to high school students, brought 18,500 papers upon the assigned subject, "Past Benefits and Future Importance to Man of the Control of Disease-Bearing Mosquitoes."

Miss Raven is a student in the Stockton high school and the essay which she submitted was given first award among those entered by high school students of California. The seventh annual essay contest is now being prepared under the direction of Dr. Cary T. Grayson, president of the institute.

NEW HEALTH OFFICER FOR SOUTH PASADENA

Effective November 1, Dr. Albert Supple will become city health officer of South Pasadena, succeeding Dr. E. J. Johnston.

MORBIDITY**Complete Reports for Following Diseases for Week Ending
October 20, 1934****Chickenpox**

140 cases of chickenpox have been reported, as follows: Alameda 1, Berkeley 4, Hayward 1, Oakland 16, San Leandro 12, Contra Costa County 4, Richmond 1, Fresno County 1, Clovis 7, Imperial County 2, Kern County 2, Los Angeles County 2, Huntington Park 2, Los Angeles 19, Santa Monica 3, Madera 4, Monterey 2, Anaheim 2, La Habra 1, Plumas County 1, Riverside 1, Sacramento 10, San Diego 1, San Francisco 32, Paso Robles 3, Gilroy 1, Santa Cruz County 1, Santa Cruz 1, Tulare County 2, Porterville 1.

Diphtheria

35 cases of diphtheria have been reported, as follows: Fresno County 1, Imperial County 1, Imperial 1, Kern County 1, Los Angeles County 2, Compton 1, Long Beach 1, Los Angeles 13, Bell 1, Placentia 1, San Diego County 2, San Francisco 2, Stockton 1, Santa Barbara County 1, Santa Clara County 1, San Jose 1, Santa Cruz County 3, Tulare 1.

German Measles

10 cases of German measles have been reported, as follows: Berkeley 1, Lake County 1, Los Angeles County 1, Compton 1, Los Angeles 5, San Luis Obispo 1.

Influenza

17 cases of influenza have been reported, as follows: Oakland 1, Bakersfield 1, Lake County 3, Los Angeles County 2, Glendale 2, Los Angeles 7, La Habra 1.

Malaria

55 cases of malaria have been reported, as follows: Oakland 1, Gridley 1, Fresno County 1, San Joaquin County 38, Lodi 9, Manteca 1, Stockton 1, Porterville 2, Tulare 1.

Measles

145 cases of measles have been reported, as follows: Berkeley 1, Oakland 1, Colusa County 1, Concord 1, Martinez 1, Imperial 1, Glendale 1, Los Angeles 3, Orange County 5, Sacramento County 1, Ontario 1, San Diego County 1, Chula Vista 1, San Francisco 3, San Joaquin County 24, Stockton 1, Tracy 48, Santa Barbara County 4, Santa Maria 34, San Jose 1, Santa Cruz 8, Exeter 2, Woodland 1.

Mumps

65 cases of mumps have been reported, as follows: Alameda County 4, Berkeley 1, Oakland 2, Fresno 1, Los Angeles County 3, Culver City 1, Glendale 2, Long Beach 3, Los Angeles 8, Placentia 1, Riverside 2, Sacramento 2, San Francisco 9, San Joaquin County 2, Lodi 1, Santa Barbara County 9, Santa Maria 11, Gilroy 1, Ventura County 1, Ventura 1.

Pneumonia (Lobar)

18 cases of lobar pneumonia have been reported, as follows: Berkeley 1, Oakland 1, Lake County 1, Los Angeles County 1, Huntington Park 1, Long Beach 1, Los Angeles 5, Santa Monica 1, Monterey County 1, La Habra 1, Sacramento County 1, North Sacramento 1, San Francisco 2.

Scarlet Fever

186 cases of scarlet fever have been reported, as follows: Alameda County 3, Berkeley 2, Oakland 2, Butte County 1, Contra Costa County 3, Pittsburg 1, Fresno County 2, Sanger 1, Kern County 1, Bakersfield 1, Los Angeles County 18, Alhambra 4, Burbank 2, El Monte 1, Huntington Park 1, Long Beach 4, Los Angeles 39, Monrovia 1, Pasadena 1, Pomona 1, Santa Monica 1, Whittier 1, Hawthorne 1, South Gate 2, Maywood 1, Bell 2, Monterey County 1, Orange County 4, Orange 2, Santa Ana 3, Seal Beach 1, Riverside County 1, Sacramento County 5, Sacramento 6, Chino 1, Ontario 1, San Diego County 2, National City 1, San Diego 5, San Francisco 13, San Joaquin County 4, Lodi 1, Tracy 1, San Luis Obispo County 1, South San Francisco 2, Santa Barbara County 2, Lompoc 1, Santa Barbara 1, Santa Maria 1, Santa Clara County 4, San Jose 4, Siskiyou County 3, Vallejo 4, Stanislaus County 2, Turlock 1, Tulare County 3, Dinuba 1, Ventura County 1, Ventura 3, Yolo County 3.

Smallpox

No cases of smallpox have been reported.

Typhoid Fever

14 cases of typhoid fever have been reported, as follows: Fresno County 1, Kern County 2, Madera County 3, Orange County 1, Placer County 2, Plumas County 1, Sacramento County 2, Tracy 1, California 1.*

Whooping Cough

83 cases of whooping cough have been reported, as follows:

*Cases charged to "California" represent patients ill before entering the State or those who contracted their illness traveling about the State throughout the incubation period of the disease. These cases are not chargeable to any one locality.

Oakland 4, Colusa 2, Contra Costa County 1, Fresno County 2, Los Angeles County 4, Azusa 2, Burbank 3, Glendale 1, La Verne 1, Long Beach 1, Los Angeles 4, Pasadena 1, Orange County 1, Plumas County 3, National City 1, San Diego 12, San Francisco 17, San Luis Obispo County 4, Redwood City 3, San Mateo 1, Santa Barbara County 3, Lompoc 8, Santa Maria 2, Ventura 2.

Meningitis (Epidemic)

3 cases of epidemic meningitis have been reported, as follows: Emeryville 1, Los Angeles 1, Siskiyou County 1.

Dysentery (Amoebic)

3 cases of amoebic dysentery have been reported, as follows: Santa Ana 1, Riverside 2.

Dysentery (Bacillary)

7 cases of bacillary dysentery have been reported, as follows: Los Angeles 2, Pasadena 1, San Fernando 1, San Francisco 1, Santa Barbara County 1, Mountain View 1.

Ophthalmia Neonatorum

One case of ophthalmia neonatorum from Los Angeles has been reported.

Poliomyelitis

38 cases of poliomyelitis have been reported, as follows: Berkeley 1, Fresno County 1, Fresno 1, Selma 1, Kern County 11, Bakersfield 4, Los Angeles County 2, Inglewood 1, Los Angeles 6, Santa Monica 1, Monterey Park 1, Orange County 2, Sacramento 1, Lompoc 2, Tulare County 2, California 1.*

Tetanus

One case of tetanus from Los Angeles has been reported.

Trachoma

6 cases of trachoma have been reported, as follows: Riverside County 1, San Diego 2, Santa Clara County 1, Ventura County 2.

Trichinosis

One case of trichinosis from San Francisco has been reported.

Food Poisoning

3 cases of food poisoning from Pacific Grove have been reported.

Undulant Fever

4 cases of undulant fever have been reported, as follows: Kern County 1, Los Angeles 1, Redlands 1, Modesto 1.

Septic Sore Throat (Epidemic)

3 cases of epidemic septic sore throat have been reported, as follows: Marin County 1, Daly City 1, Redwood City 1.

Relapsing Fever

3 cases of relapsing fever have been reported, as follows: Placer County 2, San Bernardino County 1.

Psittacosis

One case of psittacosis from San Francisco has been reported.

Rabies (Animal)

18 cases of rabies in animals have been reported, as follows: Los Angeles County 2, Inglewood 1, Los Angeles 4, Hawthorne 1, San Diego 10.

NEW HEALTH OFFICERS

Dr. Gilbert Furness has been appointed city health officer for Visalia, to succeed Dr. A. W. Preston.

Mr. A. Stanley Court has succeeded Mr. F. M. Ecclefield as city health officer of Livingston.

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